

**REMARKS/ARGUMENTS**

Claim 17, 18, 21-28, 30 and 43-57 are pending in this Application. Independent claims 17 and 43 have been amended and claims 44-57 are new.

**Claim remarks with regards to 35 U.S.C. §103**

The Examiner has rejected claims 17, 18, 21-28, 30 and 43 under 35 U.S.C. §103(a) as being unpatentable over Kanegasaki et al (US 2003/0003570). For at least the reasons stated herein Applicant respectfully disagrees.

With respect to currently amended independent claims 17 and 43, assembly of the device as disclosed and suggested by the reference of Kanegasaki et al. does not comprise “a barrier region that couples said first microfluidic region with said second microfluidic region and configured in a way to allow less than a whole of a biological specimen to extend across said barrier region from one of said microfluidic regions.” The barrier region as taught by Kanegasaki et al., allows for passing through of a biological specimen in the apparatus, specifically paragraph 100 which states:

In the apparatus for detecting chemotaxis of cells or separating chemotactic cells, a cell suspension is put into one of the wells while a specimen solution is put into the other well. Then it is detected whether or not cells migrate toward the well holding the specimen solution, or cells which have migrated are selectively collected. In this apparatus, for example, the well holding the cell suspension is connected to the well holding the specimen solution via a channel. Thus, the state where the cells are passing through the channel is observed, or the cells which are passing or have passed through the channel are counted.

With respect to independent claims 44 and 57, the device as disclosed and suggested by the reference of Kanegasaki et al. does not comprise the device recited in currently amended claim 17 or the assembly steps recited in currently amended claim 43 as relating to “micropatterning cell-adherent coating configured to direct cell attachment onto a substrate.” There is no motivation to combine Kanegasaki et al. with any references with a cell-adherent coating since the Kanegasaki et al. reference is directed to an apparatus for judging whether or not cells can migrate in a definite direction by their

own actions, observing the state of cells migrating in a definite direction by their own actions, or counting cells having migrated in a definite direction by their own actions (i.e., an apparatus for detecting chemotaxis of cells). Cells as taught in the Kanegasaki et al. reference are mobile and chemotactic cells. The apparatus as recited by Kanegasaki et al. reference cannot be employed for the purpose of observing, for example, chemotactic response or movement of a cellular extension or outgrowth domain of an adherent cell.

It is respectfully requested that the Examiner consider new claims 44-57 submitted herewith. Applicant asserts these claims are allowable over the patent cited by the Examiner for the reason that microfluidic device with a micropatterned cell-adherent coating allows for observing a biological specimen adhered in any specific way, e.g., a biological specimen into the first microfluidic region, observing cellular extension or outgrowth of the biological specimen across the barrier region to the second microfluidic region.

## **CONCLUSION**

It is believed that claims 17, 18, 21-28, 30 and 43-57 are allowable over the prior art and over the documents cited by the Examiner and that these claims are now in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

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